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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,108	07/08/2004	Matthias Koenig	CM00681M	1708

22917 7590 02/01/2006

MOTOROLA, INC.  
1303 EAST ALGONQUIN ROAD  
IL01/3RD  
SCHAUMBURG, IL 60196

EXAMINER
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NGUYEN, TUAN HOANG

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 02/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/501,108	KOENIG, MATTHIAS	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tuan H. Nguyen	2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-16 is/are rejected.
- 7) ☒ Claim(s) 5-8 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>07/08/2004</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3, 9-13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dent (U.S PAT. 5,903,835) in view of Bazarjani et al. (U.S PAT. 6,005,506 hereinafter, "Bazarjani").

Regarding claims 1 and 16, Dent discloses a wireless communication unit incorporating a receiver, the receiver comprising: radio frequency circuitry for receiving a radio frequency signal and converting radio frequency signal to a low frequency signal

(Fig. 1, col. 3 lines 35-40); a signal level adjustment circuit for receiving low frequency signal (Fig. 1, col. 3 lines 40-44); an analogue to digital converter, operably coupled to signal level adjustment circuit for receiving an adjusted low frequency signal and providing a digital received signal (Fig. 1, col. 3 lines 52-63); and a signal processor operably coupled to the analogue to digital converter for processing digital received signal (Fig. 1, col. 3 lines 52-63). Dent differs from the claimed invention in not specifically teaching signal level adjustment circuit includes a low frequency amplifier whose gain is arranged to be dependent upon a clip point of analogue to digital converter. However, Bazarjani teaches signal level adjustment circuit includes a low frequency amplifier whose gain is arranged to be dependent upon a clip point (read on "out of band quantization noise) of analogue to digital converter (col. 3 lines 13-61). Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Dent in signal level adjustment circuit includes a low frequency amplifier whose gain is arranged to be dependent upon a clip point of analogue to digital converter, as per teaching of Bazarjani, because it is utilized digital transmission because of the improved efficiency and the ability to detect and correct transmission errors.

Regarding claim 3, Bazarjani further discloses the gain of low frequency amplifier is arranged to be dependent upon a clip point of said dynamic compressor function (col. 3 lines 13-61).

Regarding claim 9, Bazarjani further discloses low frequency components are at an intermediate or baseband frequency (col. 2 lines 24-30).

Regarding claim 10, Bazarjani further discloses receiver has a high dynamic range, for example in excess of 100 dB (col. 3 lines 51-61).

Regarding claim 11, Dent further discloses signal level adjustment circuit negates a need for an automatic gain control circuit (col. 3 lines 35-50).

Regarding claim 12, Dent further discloses the wireless communication unit is a subscriber unit or a base transceiver station operating in a wireless communication system (col. 4 line 53 through col. 5 line 6).

Regarding claim 13, Dent further discloses the subscriber unit is one of a portable or mobile PMR radio, a mobile phone, a personal digital assistant, a wireless capable laptop computer (col. 4 line 53 through col. 5 line 6).

4. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dent (U.S PAT. 5,903,835) in view of Bazarjani et al. (U.S PAT. 6,005,506 hereinafter, "Bazarjani") as applied to claims above, and further in view of Minnis. (U.S PAT. 4,114,115).

Regarding claims 2, Dent and Bazarjani, in combination, fails to disclose the signal level adjustment circuit is further by comprises a dynamic compressor function, operably coupled to low frequency amplifier for limiting a signal output from low frequency amplifier. However, Minnis teaches the signal level adjustment circuit is further by comprises a dynamic compressor function, operably coupled to low frequency amplifier for limiting a signal output from low frequency amplifier (Fig. 4 col. 4 lines 28-52). Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to incorporate the disclosing of Minnis into view of Dent and Bazarjani, in order to provide an operational amplifier having a plurality of gain controlling feedback paths that are respectively responsive to different portions of the input frequency spectrum.

Regarding claim 4, Minnis further discloses the gain of said low frequency amplifier is arranged to be dependent upon the clip point of dynamic compressor function subtracted by the clip point of analogue to digital converter (Fig. 4 col. 4 lines 28-52).

5. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dent (U.S PAT. 5,903,835) in view of Bazarjani et al. (U.S PAT. 6,005,506 hereinafter, "Bazarjani") as applied to claims above, and further in view of Ostman et al. (U.S PAT. 6,069,923 hereinafter, "Ostman").

Regarding claims 14, Dent and Bazarjani, in combination, fails to disclose the received signal is a digitally modulated signal. However, Ostman teaches the received signal is a digitally modulated signal (col. 8 lines 33-34). Therefore, it is obvious to one of ordinary skill in the art at the time the invention was made to incorporate the disclosing of Ostman into view of Dent and Bazarjani, in order to process a signal in connection with its reception, when the signal conforms to one or more system specifications.

Regarding claim 15, Ostman further discloses the receiver is a linear receiver for receiving said digitally modulated signal (col. 7 lines 6-17).

### ***Allowable Subject Matter***

6. Claims 5-8, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

7. Any response to this action should be mailed to:

Mail Stop \_\_\_\_\_ (Explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Facsimile responses should be faxed to:

(571)-273-8300

Hand-delivered responses should be brought to:

Customer Service Window

Randolph Building

401 Dulany Street

Alexandria, VA 22313

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan H. Nguyen whose telephone number is (571) 272-8329. The examiner can normally be reached on 8:00Am - 5:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan Nguyen  
Examiner  
Art Unit 2643



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SENIOR PRIMARY EXAMINER  
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